CLAIMS

What is claimed as new and desired to be protected by Letters Patent of the United States is:

1. A method of handling an electronic mail ("e-mail") message, comprising:

a)   at a sender's side, providing to a service a request comprising information regarding the e-mail message;

b)   at the service,

b1)   processing at least a portion of the request to determine a result; and

b2)   providing the result to the sender's side;

c)   at the sender's side,

c1)   incorporating the result into the e-mail message, and

c2)   transmitting the result-incorporated e-mail message via an e-mail system;

d)   at the receiver's side,

d1)   receiving an e-mail message which is nominally the result-incorporated e-mail message;

d2)   processing the received result-incorporated e-mail message to assess the integrity of the e-mail message.

2. The method of claim 1, wherein:

the step of processing at least a portion of the request to determine a result includes generating a digital signature based on the portion of the request;

the result includes the digital signature; and the step of processing the received result-incorporated e-mail message includes processing the digital signature.

3. The method of claim 2, wherein:

the step of generating the digital signature includes performing a public/private key encryption of the portion of the request to generate the digital signature; and

the step of processing the digital signature includes performing a public/private key decryption of the digital signature.

4. The method of claim 1, further comprising:

determining whether the e-mail message which is nominally the result-incorporated e-mail message is actually a result-incorporated e-mail message;

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if the e-mail message is not actually a result-incorporated e-mail message, performing a first particular action.

5. The method of claim 1, further comprising:

performing a particular action based on an outcome of assessing the integrity of the e-mail message.

6. The method of claim 5, wherein:

the particular action includes displaying an indication of the outcome of assessing the integrity of the e-mail message.

7. The method of claim 5, wherein:

the particular action includes organizing an e-mail inbox associated with the receiver based on the determination.

8. The method of claim 1, wherein:

the result includes an indication of a level of certification; and the integrity is assessed in view of the indication of the level of certification.

9. The method of claim 1, wherein:

the result includes an indication of a level of certification; and

the step of processing the received result-incorporated e-mail message to assess the integrity of the e-mail message includes processing the result to determine the level of certification.

10. The method of claim 9, further comprising:

at the receiver's side, filtering the e-mail message based on the determined level of certification.

11. The method of claim 1, wherein:

the step of generating the digital signature, at the service, includes encrypting the portion of the request according to a public/private key encryption scheme to generate the digital signature; and

the step of processing the digital signature, at the receiver's side, includes decrypting the digital signature according to the public/private key encryption scheme.

12. The method of claim 1, wherein:

the request further comprises sender verification information; and the method further comprises

at the service, processing the sender verification information.

13. The method of claim 1, wherein:

the request includes a digest of the message body.

14. The method of claim 13, wherein:

the request does not include the message body or information from which the message body can be derived.

15. The method of claim 13, wherein:

the digest of the message is generated, at the sender's side, using an SHA algorithm.

16. The method of claim 13, wherein:

the step of processing the received result-incorporated e-mail message to assess the integrity of the e-mail message includes:

derning the portion of the request from which the result

was determined;

processing the portion of the request and the received e-mail message to assess the integrity of the e-mail message.

17. The method of claim 16, wherein:

deriving the portion of the request from which the result was determined includes processing the result using a decryption algorithm to generate a decrypted result;

processing the portion of the request and the received e-mail message to assess the integrity of the e-mail message includes

generating a digest of the message body and processing the generated digest and the decrypted result to assess the integrity of the e-mail message.

18. The method of claim 17, wherein:

using a decryption algorithm to generate a decrypted result includes processing the result according to a public/private key decryption algorithm.

19. The method of claim 1, wherein:

at the sender's side, the result is incorporated into the message by including the result in a header associated with the message.

20. The method of claim 19, wherein:

the message is formatted according to an SMTP; and

the header associated with the message is an SMTP header.

21. The method of claim 1, wherein:

a sender is nominally associated with the sender's side; and

the method further comprises:

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at the service, associating a physical location with the
sender.

22. The method of claim 1, wherein:

a sender is nominally associated with the sender's side; and

the method further comprises:

at the service, determining how the sender may be later
located.

23. The method of claim 22, wherein:

determining how the sender may be later located includes associating a degree
of certainty with the determination.

24. The method of claim 23, wherein:

the result includes an indication of the degree of certainty.

25. The method of claim 1, further comprising:

at the service, before transmitting the result to the sender's side, receiving from
the sender an indication of agreement to terms of use of the service.

26. The method of claim 25, wherein:

the indication of agreement to terms of use of the service received from the
sender as part of an initial subscription by the sender to the service.

27. The method of claim 1, wherein:

the sender's side is nominally associated with a particular e-mail address of a
plurality of e-mail addresses; and

the method further comprises:

at the service, before transmitting the result to the sender's side, sending
an inquiry e-mail message to the particular e-mail address; and

at the service, observing behavior of the sender associated with the
inquiry e-mail message.

28. The method of claim 27, wherein:

the behavior of the sender associated with the inquiry e-mail message includes
the sender sending an e-mail message to the service in reply to the inquiry e-mail
message.

29. The method of claim 27, wherein:

the behavior of the sender associated with the inquiry e-mail message includes
following instructions set forth in the inquiry e-mail message.

30. The method of claim 29, wherein:

the instructions include instruction to link to a particular universal resource locator.

31. The method of claim 1, further comprising:

at the service, before transmitting to the sender's side the request comprising information regarding the e-mail message, receiving a request for the sender to subscribe to the service;

at the service, sending an inquiry message to a sender associated with the sender's side, by a transmission channel other than the electronic mail system; and

at the service, observing behavior associated with the inquiry message.

32. The method of claim 31, wherein:

the transmission channel includes a hardcopy delivery service.

33. The method of claim 32, wherein:

the hardcopy delivery service includes a mail service or similar courier service.

34. The method of claim 33, wherein:

the mail service or similar courier service requires signature of the sender.

35. The method of claim 1, wherein:

the request includes an indication of an e-mail address associated with the sender, an indication of an e-mail address associated with the recipient, and a digest of a body of the e-mail message; and

processing at least a portion of the request to determine the result includes encrypting the request to determine the result.

36. The method of claim 1, wherein:

at the receiver's side, processing the received result-incorporated e-mail message to assess the integrity of the e-mail message is without interacting with the service.

37. The method of claim 36, wherein:

at the service, processing at least a portion of the request to determine a result includes encrypting the portion of the request using a private key, according to a public/private key encryption scheme; and

at the receiver's side, processing the received result-incorporated e-mail message includes decrypting the result using the public key.

38. The method of claim 1, further comprising:

at the service,

processing at least a portion of the request to generate a secondary result;
and

providing an indication of the secondary result to the sender's side.

39. The method of claim 38, further comprising:

at the sender's side, performing a particular action based on the secondary
result.

40. The method of claim 38, wherein:

the indication of the secondary result is an indication that the e-mail message
was generated as the result of a virus.

41. The method of claim 38, further comprising:

at the service,

processing at least a portion of the request to generate a secondary
result; and

performing a particular action based on the secondary result.

42. The method of claim 41, wherein:

the particular action includes not determining the result.

43. The method of claim 41, wherein:

the particular action includes not providing the result to the sender's side.

44. The method of claim 1, further comprising:

at the service,

for a plurality of e-mails provided from the sender's side,
determining a collective characteristic of the plurality of e-mails.

45. The method of claim 44, further comprising:

at the service,

performing a particular action based on the determined collective
characteristic.

46. The method of claim 45, wherein:

the particular action performed at the service based on the determined collective
characteristic includes not providing the result.

47. The method of claim 1, further comprising:

at the receiver's side, processing a request from the receiver to obtain contact
information about the sender from the service; and

at the service, providing the requested contact information about the sender to
the receiver's side.

48. The method of claim 47, wherein:

the requested contact information about the sender provided from the service to the receiver's side is in a format appropriate to an e-mail client program used by the receiver's side.

49. The method of claim 47, wherein:

the requested contact information includes at least one link to advertising information relative to the sender.

50. The method of claim 1, wherein:

the service includes a plurality of processing portions; and

the method includes determining a particular one of the plurality of processing portions to utilize to determine the result.

51. The method of claim 50, wherein:

determining a particular one of the plurality of processing portions at the service is based on information provided in association with the request from the sender's side.

52. The method of claim 51, wherein:

the information provided in association with the request from the sender's side includes information previously provided from the service to the sender's side.

53. The method of claim 52, further comprising:

determining that the information provided to the service from the sender's side is inappropriate for use to determine the particular one of the plurality of processing portions; and

based on determining that the information provided to the service from the sender's side is inappropriate for use to determine the particular one of the plurality of processing portions, at the service, determining a particular one of the plurality of processing portions based on other than the information provided in association with the request from the sender's side.

54. The method of claim 53, further comprising:

after determining a particular one of the plurality of processing portions based on other than the information provided in association with the request from the sender's side, providing information regarding the determination back to the sender, to be provided to the service in subsequent requests.

55. The method of claim 1, wherein:

processing the received result-incorporated e-mail message to assess the integrity of the received e-mail message includes

processing the received e-mail message to nominally reproduce the result determined at the service;

comparing the result and the nominally reproduced result.;

assessing the integrity of the e-mail messaging based on the result of the comparing step.

56. The method of claim 55, wherein:

assessing the integrity of the e-mail message includes determining whether the result and the nominally reproduced result are the same within a particular threshold.

57. The method of claim 55, wherein:

processing the received e-mail message to nominally reproduce the result determined at the service includes modifying the received e-mail to reverse the effect of modifications that typically legitimately occur during e-mail transport.

58. The method of claim 55, further comprising:

at the sender's side, creating the information regarding the e-mail message.

59. The method of claim 58, wherein:

creating the information regarding the e-mail message includes filtering at least portions of the e-mail message to create the information regarding the e-mail message.

60. The method of claim 59, wherein:

processing the received e-mail message to nominally reproduce the result determined at the service includes filtering at least portions of the received e-mail message in a manner similar to the filtering at the sender's side.

61. The method of claim 1, wherein the processing to assess the integrity of the received e-mail message:

processing the received e-mail message to ascertain the service-determined result;

wherein the step of comparing the result and the nominally-reproduced result includes comparing the ascertained service determined-result and the nominally-reproduced result.

62. The method of claim 61, wherein:

processing the received e-mail message to ascertain the service-determined result includes accessing the service-determined result using a public key associated with a private key used by the service to sign the service-determined result.

63. The method of claim 62, wherein the step of processing the received e-mail message to ascertain the service-determined result includes accessing the public key from storage at the receiver's side.

64. The method of claim 63, wherein accessing the public key from storage at the receiver's side includes accessing the storage using an identification indicator provided by the service with the e-mail message.

65. The method of claim 64, wherein the identification indicator is provided by the service with the e-mail message in plain text.

66. The method of claim 64, wherein accessing the public key from a storage at the receiver's side includes, determining if there is a public key in the storage at the receiver's side associated with the identification indicator and, if not, accessing the public key from the service.

67. The method of claim 66, wherein:

determining if there is a public key in the storage at the receiver's side associated with the identification indicator includes determining if the identification indicator is in a list of identification indicators associated with public keys in the storage at the receiver's side.

68. The method of claim 66, wherein:

accessing the public key from the service includes communicating between the receiver's side and the service according to a secure communication protocol.

69. The method of claim 63, further comprising:

in conjunction with providing the result to the sender's side, providing a notification from the service to the sender that at least one additional public key is available to be requested by the sender from the service; and

on the sender's side, requesting the at least one additional public key from the service.

70. The method of claim 69, wherein the notification from the service to the sender is provided to the sender's side prior to one or more effective dates associated with the at least one additional public key.

71. The method of claim 70, wherein the service provides the notifications to senders according to predicted characteristics associated with responding to requests from senders requesting the at least one additional public key from the service.

72. The method of claim 4, wherein:

the first particular action includes causing an invitation to be sent by e-mail to the sender of the received e-mail message, to subscribe to the service.

73. The method of claim 72, wherein:

causing an invitation to be sent to the sender includes causing an invitation to be sent to the sender without the involvement of the service.

74. The method of claim 73, wherein:

causing an invitation to be sent to the sender without the involvement of the service includes causing an invitation to be sent to the sender directly via the e-mail system of the recipient.

75. The method of claim 72, wherein:

causing an invitation to be sent to the sender of the received e-mail message includes refraining from causing an invitation to be sent under particular conditions.

76. The method of claim 75, wherein:

the particular conditions include the sender is incapable of subscribing to the service.

77. The method of claim 75, wherein:

the particular conditions include the sender is incapable of subscribing to the service because the e-mail client software used by the sender is incompatible with the service.

78. The method of claim 75, wherein:

the particular conditions include the recipient has caused an invitation to be sent to the sender within a particular amount of time previous.

79. The method of claim 75, wherein:

a particular format of the invitation is selectable by the recipient.

80. The method of claim 1, further comprising:

at the receiver's side,

determining whether the received e-mail message is an invitation to the receiver to subscribe to the service; and

when it is determined that the received e-mail message is an invitation to the receiver to subscribe to the service, taking a particular action.

81. The method of claim 80, wherein:

the particular action includes making the invitation invisible to the receiver.

82. The method of claim 80, wherein:

determining whether the received e-mail message is an invitation to the receiver to subscribe to the service includes inspecting a header of the received e-mail message.

83. The method of claim 82, wherein:

inspecting a header of the received e-mail message includes determining the presence of a particular indicia.

84. The method of claim 83, wherein:

the particular indicia is a particular text string.

85. A method of composing and distributing content, comprising:

using a web browser program at a client location, interacting with a web-based service to compose content desired to be provided to at least one recipient;

using the browser program, interacting with an e-mail program at the client location to cause the e-mail program to send at least one e-mail message to the at least one recipient including the composed content.

86. The composing and distributing method of claim85, wherein:

no identifiable characteristics of the at least one recipient are provided to the web-based service.

87. The composing and distributing method of claim 86, wherein:

the identifiable characteristics not provided to the web-based service include e-mail addresses of the at least one recipient.

88. The method of claim 1, further comprising:

at the receiver's side,

determining that a received e-mail message does not have a result incorporated therein; and

based on the result of the determining step, causing an invitation to subscribe to the service to be transmitted to the sender of the received e-mail message.

89. The method of claim 88, further comprising:

determining the sender of the received e-mail message by processing a reply-to field in the received e-mail message.

90. The method of claim 88, wherein:

causing an invitation to be transmitted is filtered based on characteristics associated with the sender of the received e-mail message.

91. The method of claim 90, wherein:

the characteristics include whether an invitation was, at the receiver's side, previously caused to be transmitted to the sender.

92. The method of claim 91, wherein:

the characteristics include an amount of time that has passed since an invitation was, at the receiver's side, previously caused to be transmitted to the sender.

93. The method of claim 1, further comprising:

providing, from the service to the receiver's side, information regarding the sender.

94. The method of claim 93, further comprising:

transmitting a request for the information regarding the sender from the receiver's side to the service.

95. The method of claim 94, wherein:

transmitting the request for information regarding the sender is in response to activation of a user interface item at the receiver's side.

96. The method of claim 95, wherein:

the user interface item is a toolbar item incorporated into an e-mail client program at the receiver's side.

97. The method of claim 95, wherein:

the information regarding the sender includes information regarding an indication of trust associated with the sender.

98. The method of claim 97, wherein:

the indication of trust associated with the sender is an indication of one of a plurality of distinct levels of trust associated with the sender.

99. The method of claim 98, wherein:

each of the plurality of distinct levels of trust is indicated by a separate color.

100. The method of claim 94, further comprising:

at the receiver's side, generating a contact record for the sender, associated with the e-mail client program of the receiver, based on the information regarding the sender provided from the service.

101. The method of claim 100, wherein:

generating the contact record for the sender includes:

determining whether there is a contact record, compatible with the e-mail client program of the receiver, available at the service; and

based on a determination that there is a compatible contact record available at the service, generating the contact record associated with the e-mail client program of the receiver by receiving a copy of the compatible contact record from the service.

102. The method of claim 101, further comprising:

based on a determination that there is not a compatible contact record available at the service, generating the contact record associated with the e-mail client program of the receiver by constructing the contact record based on information about the sender provided from the service.

103. The method of claim 12, further comprising:

providing the sender verification information from a database associated with an operating system of the client computer at the sender's side.

104. The method of claim 103, further comprising:

automatically synchronizing the sender verification information in the operating system database and corresponding sender verification information at the service.

105. The method of claim 12, further comprising:

providing the sender verification information from storage associated with the client computer, at the sender's side; and

automatically synchronizing the sender verification information in the storage associated with the client computer and corresponding sender verification information at the service, while the user at the sender's side is logged in to the service.

106. The method of claim 105, wherein:

the automatically synchronizing step that occurs while the user at the sender's side is logged in to the service is a result of the computer at the sender's side executing plug-in code associated with a browser program, via which the user at the sender's side is logged in to the service, executing on the client of the sender.

107. The method of claim 105, wherein:

the automatically synchronizing step includes:

at the service, modifying an update token when the user at the sender's side modifies the sender verification information at the service; and

at the client of the sender, comparing an update token stored at the computer of the sender's side to the update token at the service and, when the update token stored at the computer of the sender's side is different from the update token at the service,

updating the sender verification information at the computer of the sender's side to be synchronized with the sender verification information at the service; and

changing the update token stored at the computer of the sender's side to match the update token at the service.

108. The method of claim 1, further comprising:

holding, in storage at the sender's side, configuration data useable by the computer at the sender's side to configure an interaction between the computer at the sender's side and the service; and

automatically synchronizing the configuration data between the storage at the sender's side and a storage area, at the service, associated with the sender.

109. A method for communicating data between a client computer and a service, wherein the service maintains at least one public/private key encryption key pair, the method comprising:

at the client computer,

using a public key that nominally corresponds to one of the at least one public/private key encryption pair maintained by the service, to encrypt a session key;

transmitting to the service the encrypted session key and an indication of the public/private key encryption pair used to encrypt the session key;

at the service,

based on the indication of the public/private key encryption pair, using the private key of the indicated service-maintained public/private key encryption pair to decrypt the encrypted session key.

110. The method of claim 109, further comprising:

at the service,

prior to decrypting the encrypted session key, determining if the public/private key encryption pair indicated by the indication is a valid service-maintained public/private key encryption pair.

111. The method of claim 110, further comprising:

at the service,

if it is determined that the public/private key encryption pair indicated by the indication is not a valid service-maintained public/private key encryption pair, transmitting an indication thereof to the client.

112. The method of claim 111, further comprising:

at the client computer, based on receiving the indication from the service that the service has determined the public/private key encryption pair is not a valid public/private key pair, repeating the session key encrypting step with a different public key that nominally corresponds to the lat least one of the public/private key encryption pair maintained by the service.

113. The method of claim 112, wherein:

the method further comprises, at the client computer, obtaining the different public key by requesting the different public key from the service.

114. The method of claim 109, further comprising:

at the client computer,

transmitting payload data encrypted using the session key; and

at the service,

receiving the encrypted payload data and decrypting the payload data using the decrypted session key.

115. The method of claim 114, further comprising:

at the service,

transmitting payload data encrypted using the decrypted session key; and

at the client computer,

receiving the encrypted payload data and decrypting the payload data using the session key.

116. The method of claim 109, further comprising:

at the service,

transmitting payload data encrypted using the decrypted session key; and

at the client computer,

receiving the encrypted payload data and decrypting the payload data using the session key.

117. The method of claim 109, further comprising:

exchanging encrypted payload data between the client and the service, the payload data encrypted using the session key.

118. The method of claim 35, wherein:

the indication of the e-mail address associated with the recipient includes a digest of the recipient associated e-mail address in combination with a salt.

119. The method of claim 1, wherein:

at least a portion of the request includes an indication of a characteristic associated with an intended recipient of the e-mail message.

120. The method of claim 119, wherein:

the indication of a characteristic of associated with an intended recipient of the e-mail message is an indication of the e-mail address of the recipient.

121. The method of claim 119, wherein:

the sender generates the indication of the recipient's e-mail address by processing the recipient's e-mail address.

122. The method of claim 121, wherein:

processing the recipient's e-mail address includes generating a digest of data including the recipient's e-mail address.

123. The method of claim 122, wherein:

the data including the recipient's e-mail address also includes a salt.

124. The method of claim 123, wherein

the request also includes the salt itself.

125. The method of claim 124, wherein:

the result also includes the salt.

126. The method of claim 120, wherein:

at the receiver's side,

the processing includes determining the indication of the recipient's e-mail address in the result of the result-incorporated e-mail message; and

comparing the determined indication with an indication of the recipient's e-mail address generated at the receiver's side and not based on the result-incorporated e-mail message.

127. The method of claim 126, wherein:

determining the indication of the recipient's e-mail address in the result of the result-incorporated e-mail message includes determining the indication from a digest of data nominally including the recipient's e-mail address.

128. The method of claim 127, wherein:

the indication of the recipient's e-mail address generated at the receiver's side is generated by combining the recipient's e-mail address with a salt.

129. The method of claim 128, wherein:

the salt is determined at the receiver's side from the result-incorporated e-mail message.

130. The method of claim 129, wherein:

the salt is determined at the receiver's side from the result-incorporated e-mail message.

131. The method of claim 130, wherein:

determining the salt at the receiver's side from the result-incorporated e-mail message includes decrypting the result using a public key associated with a private key used by the service to encrypt the result.

132. The method of claim 94, wherein:

the request for the information regarding the sender includes the result provided as part of the result-incorporated e-mail message.

133. The method of claim 132, wherein:

at the service, providing the information regarding the sender includes providing the information regarding the sender only to a recipient of the result-incorporated e-mail message as verified from the result included in the request for information.

134. The method of claim 133, further comprising:

verifying the recipient of the result-incorporated message by

processing an e-mail address provided in the request to generate a processed e-mail address;

processing the result to determine a processed portion of the result; and

comparing the generated processed e-mail address to the determined processed portion of the result.

135. The method of claim 134, wherein:

generating the processed e-mail address includes generating a digest of the e-mail address provided in the request combined with a salt provided in the request; and

comparing the generated processed e-mail address to the processed
portion of the result includes comparing the generated digest to a
corresponding digest in the request.

136. The method of claim 94, wherein:

the information regarding the sender includes information regarding how
recipients of e-mail messages from that sender have interacted with the received e-
mail messages.

137. The method of claim 136, further comprising:

from the receiver's side, providing information to the service regarding the
receiver's interaction with the received e-mail message.

138. The method of claim 137, wherein:

the information provided to the service regarding the receiver's interaction
with the received e-mail message includes an indication of e-mail messages blocked
at the receiver's side.

139. The method of claim 137, wherein:

the information provided to the service regarding the receiver's interaction
with the received e-mail message includes an indication of click through with regard
to the received e-mail message.

140. The method of claim 137, further comprising:

at the service,

compiling the information regarding how recipients of e-mail messages
from that sender have interacted with the received e-mail messages.

141. The method of claim 140, wherein:

compiling the information regarding how recipients of e-mail messages from
that sender have interacted with the received e-mail messages includes generating,
from the information, a measure of quality associated with that sender.